

Smallpox Disease Fact Sheet

What is smallpox?

Smallpox is a contagious and sometimes fatal infectious disease caused by the variola virus. The more common and more severe form of the disease is called variola major. Historically, about 30 percent of people with the variola major form of smallpox died.

The last case of smallpox in the United States was in 1949. The last natural case in the world occurred in Somalia in 1977. Routine vaccinations among the American public against smallpox stopped in 1972. The variola virus that causes smallpox officially exists only in two laboratories in the world; in the U.S. and Russia, but there is concern that the virus could be used as a bioterrorism agent, which is why federal, state and local governments are taking precautions to prepare for smallpox. Even one case of confirmed smallpox would constitute a national public health emergency. A suspected case of smallpox should be immediately reported to the health department.

How is smallpox spread?

Smallpox is spread person-to-person through direct contact with respiratory droplets, aerosols, secretions, and skin lesions of an infected person. Direct and fairly prolonged face-to-face contact (less than six feet for more than three hours) generally is required to spread smallpox from person-to-person. Although less common, it can be transmitted through contact with contaminated clothing or bedding. Smallpox cannot be spread by animals or insects.

People are contagious when the rash appears, which often begins in the mouth and throat. A person remains contagious until the rash heals and the last smallpox scab falls off.

What are the symptoms and how soon after exposure do they appear?

After a person is exposed to the virus, symptoms usually begin within 12 to 14 days, but can begin anytime between seven and 17 days. The first symptoms include fever (101-104 degrees Fahrenheit), malaise (not feeling good), headache, backache, sometimes vomiting, and occasionally mental confusion. At this time, people are usually too sick to carry on their normal activities.

Two to four days after the first symptoms a rash emerges. As the rash appears, the fever usually falls and the person may feel better. The rash begins in the mouth, spreads to the face, to the arms and legs (including hands and feet), and to the rest of the body within 24 hours. The rash first looks like raised bumps that then fill with a thick fluid and often have a depression in the center that looks like a belly-button. Within five to 10 days, the bumps become sharply raised, round and firm pustules. Within two weeks the pustules form a crust and become scabs. During the third week of the rash, the scabs fall off, leaving behind pitted scars.

What is the treatment?

Treatment consists of supportive care and relief of symptoms. No proven effective treatment exists to date, although there are some experimental antiviral medications that are being investigated.

Can vaccination after exposure prevent the disease?

Vaccination within 3 days after exposure will prevent or significantly lessen the severity of smallpox symptoms in the vast majority of people. Vaccination 4 to 7 days after exposure likely offers some protection from disease or may modify the severity of disease. Past experience indicates that the first dose of the vaccine offers protection from smallpox for three to five years, and perhaps as long as 10 years or more.

For more information, visit www.vdh.state.va.us, www.cdc.gov/smallpox, or call the CDC public response hotline at 888-246-2675 (English), 888-246-2857 (Español), or 866-874-2646 (TTY).

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